WHAT IS CLAIMED IS:

1. An exercise apparatus for providing simulated walking or running motion comprising:

a support frame;

at least one crank pivotably supported relative to said support frame so as to be rotatable about a crank axis;

at least one planetary gear pivotably supported relative to said at least one crank and rotatable therewith;

at least one sun/ring gear supported relative to said support frame and sized and positioned to engage said at least one planetary gear so as to form an epicyclic gear train; and

at least one foot-pedal pivotably supported relative to said at least one planetary gear for supporting a user's foot, whereby said at least one foot-pedal follows a substantially elliptical foot-path as said at least one crank rotates.

2. The exercise apparatus of Claim 1 wherein the effective working diameter of said at least one planetary gear is equal to one-half the effective working diameter of said at least one sun/ring gear.

3. The exercise apparatus of Claim 1 wherein the number of teeth formed on said at least one planetary gear is equal to one-half the number of teeth formed on said at least one sun/ring gear.

4. The exercise apparatus of Claim 1 wherein the effective working diameter of said at least one planetary gear is equal to about twice the effective crank-arm length of said at least one crank.

5. The exercise apparatus of Claim 1 wherein said at least one crank has an effective crank-arm length and wherein the major axis of said elliptical foot-path is greater than twice said effective crank-arm length.

6. The exercise apparatus of Claim 5 wherein the major axis of said elliptical foot-path is about quadruple said effective crank-arm length.

7. The exercise apparatus of Claim 1 comprising two planetary gears pivotably supported relative to said at least one crank and rotatable therewith and two foot-pedals pivotably supported relative to each of said planetary gears for supporting a user's feet.

8. The exercise apparatus of Claim 1 further comprising a resistance device and/or motor coupled to said at least one crank.

9. An exercise apparatus for providing simulated walking or running motion comprising:

a plurality of gears sized, positioned and supported relative to one another so as to form an epicyclic gear train, said plurality of gears including at least one planetary gear; and

at least one foot-pedal pivotably supported relative to said at least one planetary gear for supporting a user's foot, whereby said at least one foot-pedal traces a substantially elliptical foot-path as said epicyclic gear train operates.

10. The exercise apparatus of Claim 9 further comprising at least one sun/ring gear sized and supported so as to engage said at least one planetary gear and wherein the effective working diameter of said at least one planetary gear is equal to one-half the effective working diameter of said at least one sun/ring gear.

11. The exercise apparatus of Claim 9 further comprising at least one sun/ring gear sized and supported so as to engage said at least one planetary gear and wherein the number of teeth formed on said at least one planetary gear is equal to one-half the number of teeth formed on said at least one sun/ring gear.

12. The exercise apparatus of Claim 9 further comprising a rotatable crank having an effective crank-arm length for rotating said at least one planetary gear and wherein the effective working diameter of said at least one planetary gear is equal to about twice said effective crank-arm length.

13. The exercise apparatus of Claim 12 wherein the major axis of said elliptical foot-path is greater than twice said effective crank-arm length.

14. The exercise apparatus of Claim 13 wherein the major axis of said elliptical foot-path is about quadruple said effective crank-arm length.

15. The exercise apparatus of Claim 14 comprising two planetary gears pivotably supported relative to said at least one crank and rotatable therewith and two foot-pedals pivotably supported relative to each of said planetary gears for supporting a user's feet.

16. The exercise apparatus of Claim 9 further comprising a resistance device and/or motor coupled to said at least one crank.

17. An elliptical foot-path exercise apparatus comprising:

a support frame;

at least one crank pivotably supported relative to said support frame so as to be rotatable about a crank axis, said at least one crank having an effective crank-arm length;

at least one foot pedal in mechanical communication with said at least one crank, said at least one foot pedal being sized and arranged relative to said at least one crank so as to follow a substantially elliptical foot-path relative to said support frame and wherein the major axis of said elliptical foot-path is greater than twice said effective crank-arm length.

18. The exercise apparatus of Claim 117 wherein the major axis of said elliptical foot-path is about quadruple said effective crank-arm length.

19. The exercise apparatus of Claim 17 comprising at least one planetary gear mechanically coupling said at least one crank to said at least one foot pedal and being sized and arranged to engage at least one sun/ring gear so as to form an epicyclic gear train.

20. The exercise apparatus of Claim 19 wherein the effective working diameter of said at least one planetary gear is equal to one-half the effective working diameter of said at least one sun/ring gear.

21. The exercise apparatus of Claim 17 further comprising a resistance device and/or motor coupled to said at least one crank.

22. An exercise apparatus for providing simulated walking or running motion comprising two planetary gears, two sun/ring gears and at least one crank supported and arranged so as to be rotatable about a crank axis, each said planetary gear being pivotably secured to said at least one crank about a pivot point and being sized and arranged such that as said at least one crank is rotated said planetary gears engage and rotate relative to said sun/ring gears while simultaneously revolving about said crank axis so as to form an epicylic gear train, and two foot pedals each pivotably secured to a corresponding one of said planetary gears, said foot pedals being sized and arranged to support the feet of a user and whereby each said foot-pedal follows a substantially elliptical foot-path as said at least one crank is rotated.

23. The exercise apparatus of Claim 22 wherein the effective working diameter of each said planetary gears is equal to one-half the effective working diameter of each said sun/ring gear.

24. The exercise apparatus of Claim 22 wherein the effective working diameter of each said planetary gears is equal to about twice the effective crank-arm length of said at least one crank.

25. The exercise apparatus of Claim 22 wherein the major axis of said elliptical foot-path is greater than twice the effective crank-arm length of said at least one crank.

26. The exercise apparatus of Claim 25 wherein the major axis of said elliptical foot-path is about quadruple said effective crank-arm length.

27. The exercise apparatus of Claim 22 further comprising a resistance device and/or motor coupled to said at least one crank.